

**Abstract**

The present invention provides method and materials for forming a polymeric matrix having improved biocompatible properties. A polymerization accelerator is provided that includes an N-vinyl group and a biocompatible functional group. The 5 polymerization accelerator is particularly useful for the polymerization of macromers, which can be used to form biocompatible polymeric coatings on the surface of biological materials, such as cells and tissue.